

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
2. Claims 1, 3-9, and 12-19 are allowable. The restriction requirement, as set forth in the Office action mailed on 3/19/09, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.** Claim 9 and 12-17, directed to a method of making a magnetic recording medium, are no longer withdrawn from consideration because the claim(s) requires all the limitations of an allowable claim.

In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

The claims have been amended as follows to rejoin previously withdrawn claims (for claims 9, 12-13 and 15-17, the only changes made are to the status identifiers):

9. **(previously presented):** A manufacturing method for producing a magnetic recording medium according to claim 1, comprising the steps of:

preparing a substrate on which an undercoating layer is formed; and  
vapor-depositing a material for magnetic crystal grains and a material  
comprising at least one of  $\text{TiO}$  and  $\text{Ti}_2\text{O}_3$  to form a magnetic recording layer  
which includes magnetic crystal grains and a grain boundary field, which  
encloses the magnetic crystal grains.

10 and 11. (canceled).

12. **(original):** The manufacturing method for a magnetic recording medium according to claim 9, wherein the magnetic crystal grains in the magnetic recording layer comprise Pt and Cr in addition to Co as a main component; and an orientation of a magnetic easy axis of the grain is perpendicular to the substrate.

13. **(original):** The manufacturing method for a magnetic recording medium according to claim 9, wherein at least one layer contained in the undercoating layer includes nonmagnetic crystal grains which contain at least one element selected from the group consisting of Ru, Rh, Pt, and Pd as a main component.

14. **(currently amended):** The manufacturing method for a magnetic recording medium according to claim 9, wherein at least one layer contained in the undercoating layer comprises: nonmagnetic crystal grains, which contains at least one element selected from the group consisting of Ru, Rh, Pt, and Pd as a main component; and a grain boundary field, which encloses the nonmagnetic crystal grains and includes an oxide of at least one element selected from the group consisting of Si, Cr, and ~~Ti~~Ti.

15. **(original):** The manufacturing method of a magnetic recording medium according to claim 9, wherein the ratio of the substance amount of the oxide in the undercoating layer is 1 mol % or more and 15 mol % or less.

16. **(original):** The manufacturing method of a magnetic recording medium according to claim 9, wherein the oxide contained in the undercoating layer is Ti oxide, and the Ti oxide comprises at least one of  $\text{TiO}$  and  $\text{Ti}_2\text{O}_3$ .

17. **(original):** The manufacturing method of a magnetic recording medium according to claim 9, wherein the oxide contained in the undercoating layer comprises  $\text{TiO}_2$  as at least one of the Ti oxide, and the ratio of the  $\text{TiO}_2$  component in the Ti oxide is 90 mol % or less.

***REASONS FOR ALLOWANCE***

The following is an examiner's statement of reasons for allowance: the claims are allowable over the closest prior art to Wu et al. (US7192664) and Sakawaki et al. (US 7470474). Wu and Sakawaki fail to disclose the claimed range of 40-60 mol% TiO<sub>2</sub> in the Ti oxides within the magnetic recording layer of the claimed media and method of making said media. Applicant has provided evidence of unexpectedly high S/N ratio associated with the claimed range of 40-60 mol% TiO<sub>2</sub> in the Ti oxides within the magnetic recording layer. As shown in Figure 7, the endpoints of the claimed range of 40-60 mol% TiO<sub>2</sub> show S/N values that are unexpectedly increased as compared to values above and below this range.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (571) 272-1514. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Ruthkosky can be reached on (571) 272-1291. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Holly Rickman/  
Primary Examiner  
Art Unit 1785